A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H03D13/00 H03L7/089

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  $IPC \ 7 \ H03L \ H03D$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

DOCUM	IENTS CONSIDERED TO BE RELEVANT	<u> </u>	
Category °	Citation of document, with Indication, where appropriate, of	the relevant passages	Relevant to daim No.
Х	US 5 712 580 A (BAUMGARTNER S ET AL) 27 January 1998 (1998-	1,8-10	
Α ·	cited in the application column 2, line 34 - column 3, figure 1	2–7	
Χ	US 2002/135400 A1 (LIU HUNG-C 26 September 2002 (2002-09-26		1,8-10
A	column 1, paragraph 7; figure paragraph '0019! - paragraph	s 2,3	2–7
Χ	US 2001/031028 A1 (VAUCHER CI SILVEIRA) 18 October 2001 (20		1,8-10
Α	paragraphs '0024! - '0031!; f		2-7
	<del></del>	-/	
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X Fu	ther documents are listed in the continuation of box C.	χ Patent family members a	re listed in annex.
"A" docum	categories of cited documents:  nent defining the general state of the art which is not identified to be of particular relevance	"T" later document published after or priority date and not in cor cited to understand the princi invention	iflict with the application but
filing "L" docum which	r document but published on or after the International date nent which may throw doubts on priority claim(s) or h is cited to establish the publication date of another on or other special reason (as specified)	"Y" document of particular relevan	or cannot be considered to en the document is taken alone
othe	nent referring to an oral disclosure, use, exhibition or r means nent published prior to the international filing date but	document is combined with o ments, such combination bei in the art.	one or more other such docu- ng obvious to a person skilled
later	than the priority date claimed  a actual completion of the international search	"&" document member of the sam  Date of malling of the internat	
;	21 July 2004	28/07/2004	
	I mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk	Authorized officer	
	Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Ratajski, A	



Category °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 314 151 B1 (FUKAISHI MUNEO)	1-10
	US 6 314 151 B1 (FUKAISHI MUNEO) 6 November 2001 (2001-11-06) column 3, line 46 - column 4, line 17;	
	column 3, line 46 - column 4, line 17; figure 4	
A	US 5 619 171 A (RIJCKAERT ALBERT M A ET	1-10
	AL) 8 April 1997 (1997-04-08) column 2, lines 42-64; figure 2	
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## Information on patent family members

l	International Application No				
l	T/IB2004/050313				

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5712580	Α	27-01-1998	NONE		
US 2002135400	A1	26-09-2002	TW	474064 B	21-01-2002
US 2001031028	A1	18-10-2001	WO EP JP	0167612 A1 1183781 A1 2003526984 T	13-09-2001 06-03-2002 09-09-2003
US 6314151	B1	06-11-2001	JP . JP	3094971 B2 11112335 A	03-10-2000 23-04-1999
US 5619171	Α	08-04-1997	EP WO	0741931 A1 9610296 A1	13-11-1996 04-04-1996